

iPhone Specialist Lab

L05: iOS Development Patterns 2

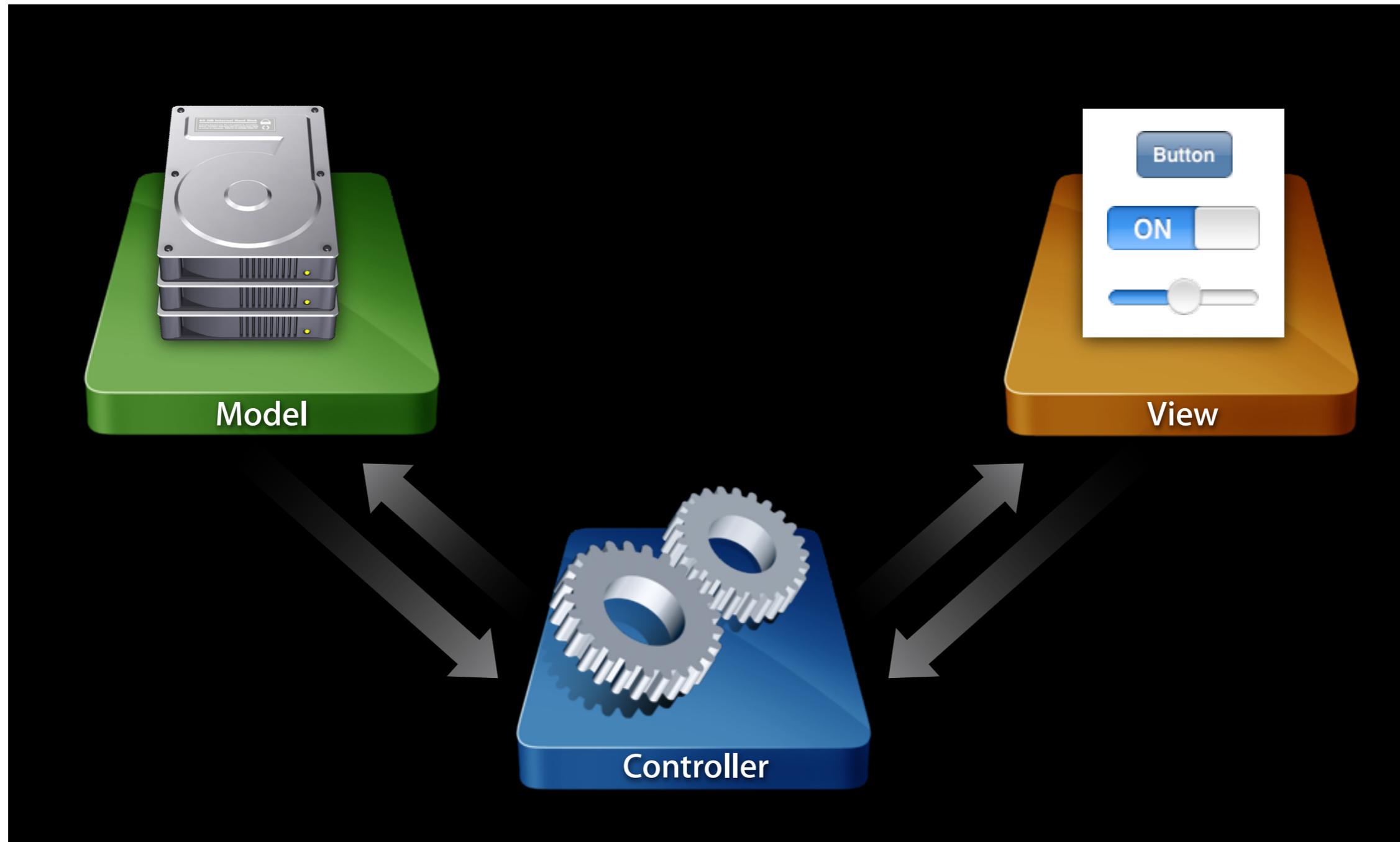
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2011

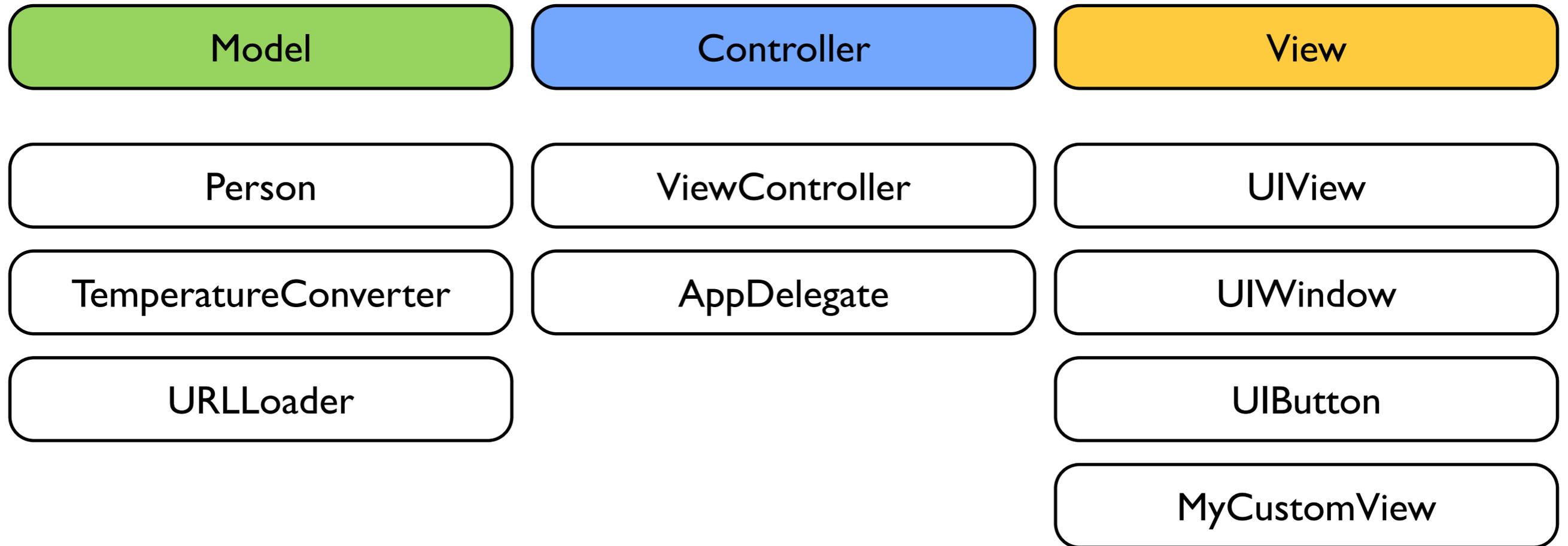
<http://hci.rwth-aachen.de/iphone>



Model-View-Controller



What goes where?



Memory Management

- When an object is created, memory is reserved for the object
- The memory should be freed when the object is no longer needed
 - Otherwise: memory usage will grow continuously
- How to determine when an object is no longer needed?

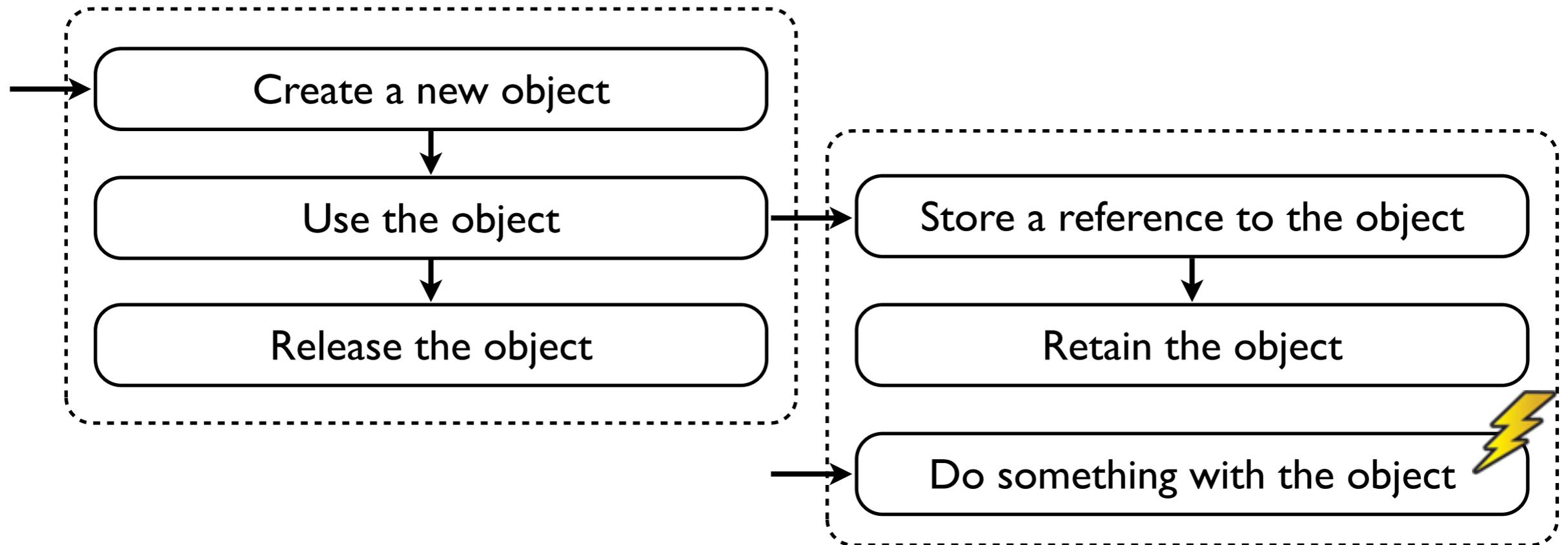


Reference Counting

- Every object has a reference counter
- An object is born with reference counter 1
- “Retain” increases the counter
- “Release” decreases the counter
- The object is destroyed as soon as the counter reaches 0



Memory Management



Memory Management Rules

- You must release objects you own
- You must not release objects you do not own
- You take ownership of an object by..
 - creating it (alloc, new, copy)
 - retaining it
- You must take ownership of your instance variables and properties
 - Exception: delegates



Autorelease

- Autorelease releases an object “some time in the future”
- You must use it when returning objects that you created
 - return [object autorelease]
- You can use it for temporary objects
 - person = [[[Person alloc] init] autorelease]
 - or (often): person = [Person person]
 - Autorelease objects must be treated as **not owned**



Demo



Build-In ViewControllers

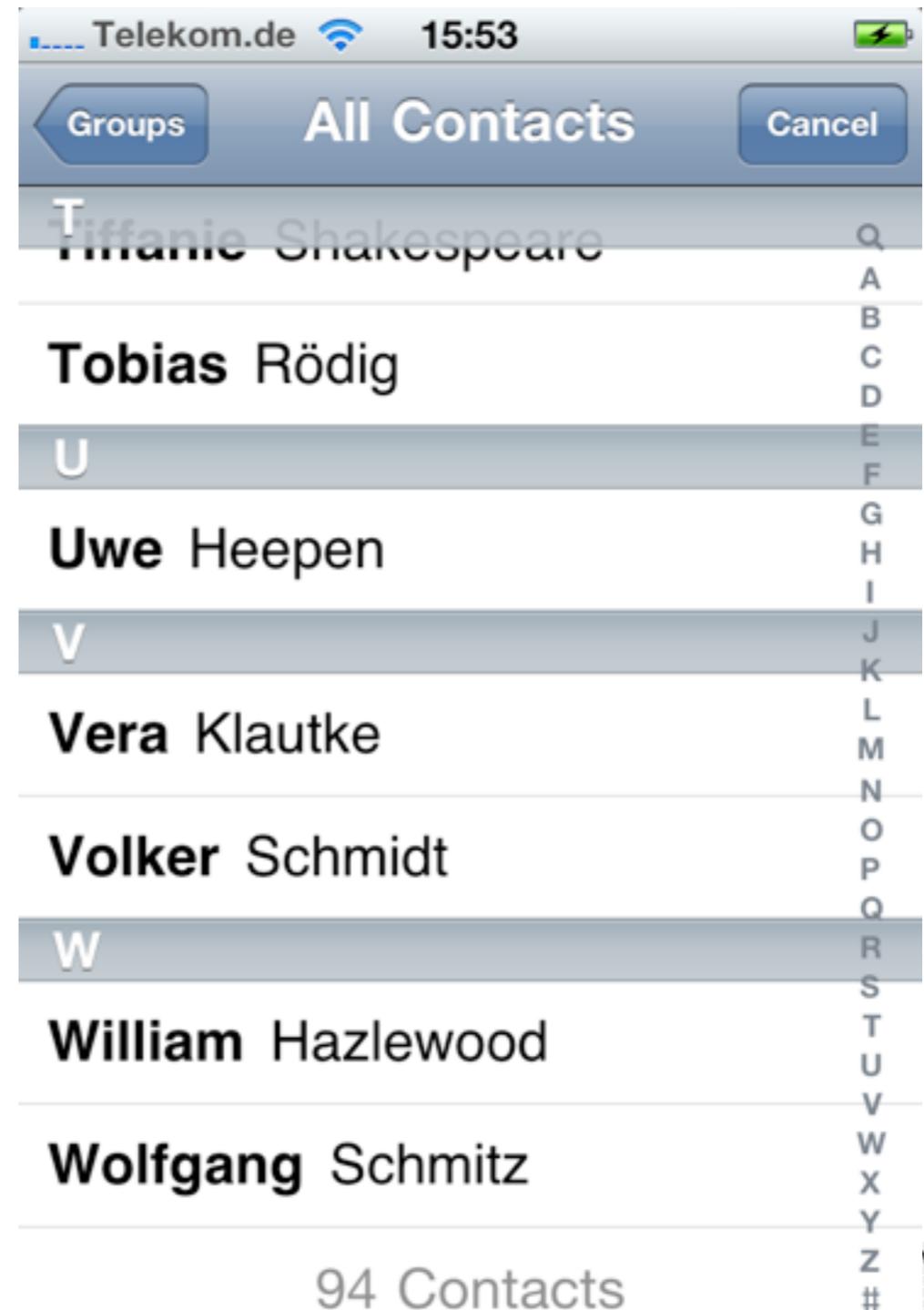
- Address Book
- Event Kit
- Message UI
- Image Picker
- Media Player
- Media Picker
- Map Kit
- Web Kit



ABPeoplePickerNavigationController

```
ABPeoplePickerNavigationController *VC;
```

```
VC =  
[[ABPeoplePickerNavigationController alloc] init];
```



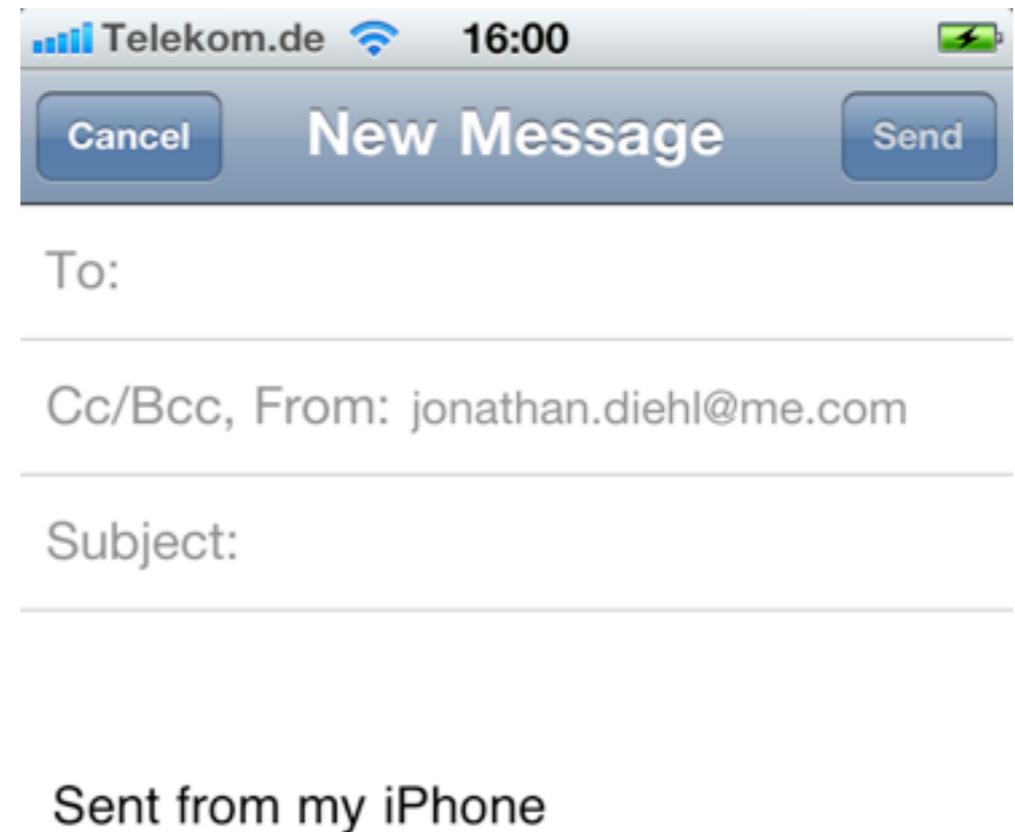
EKEventEditViewController

```
EKEventEditViewController *vc;  
EKEventStore *store;  
  
store = [[EKEventStore alloc]  
init];  
  
vc = [[EKEventEditViewController  
alloc] init];  
  
vc.eventStore = store;
```



MFMailComposeViewController

```
MFMailComposeViewController  
*VC;  
  
VC =  
[[MFMailComposeViewController  
alloc] init];
```



UIImagePickerControllerController

```
UIImagePickerController *vc;
```

```
vc = [[UIImagePickerController  
alloc] init];
```

```
vc.sourceType =  
UIImagePickerControllerSourceTy  
peCamera;
```

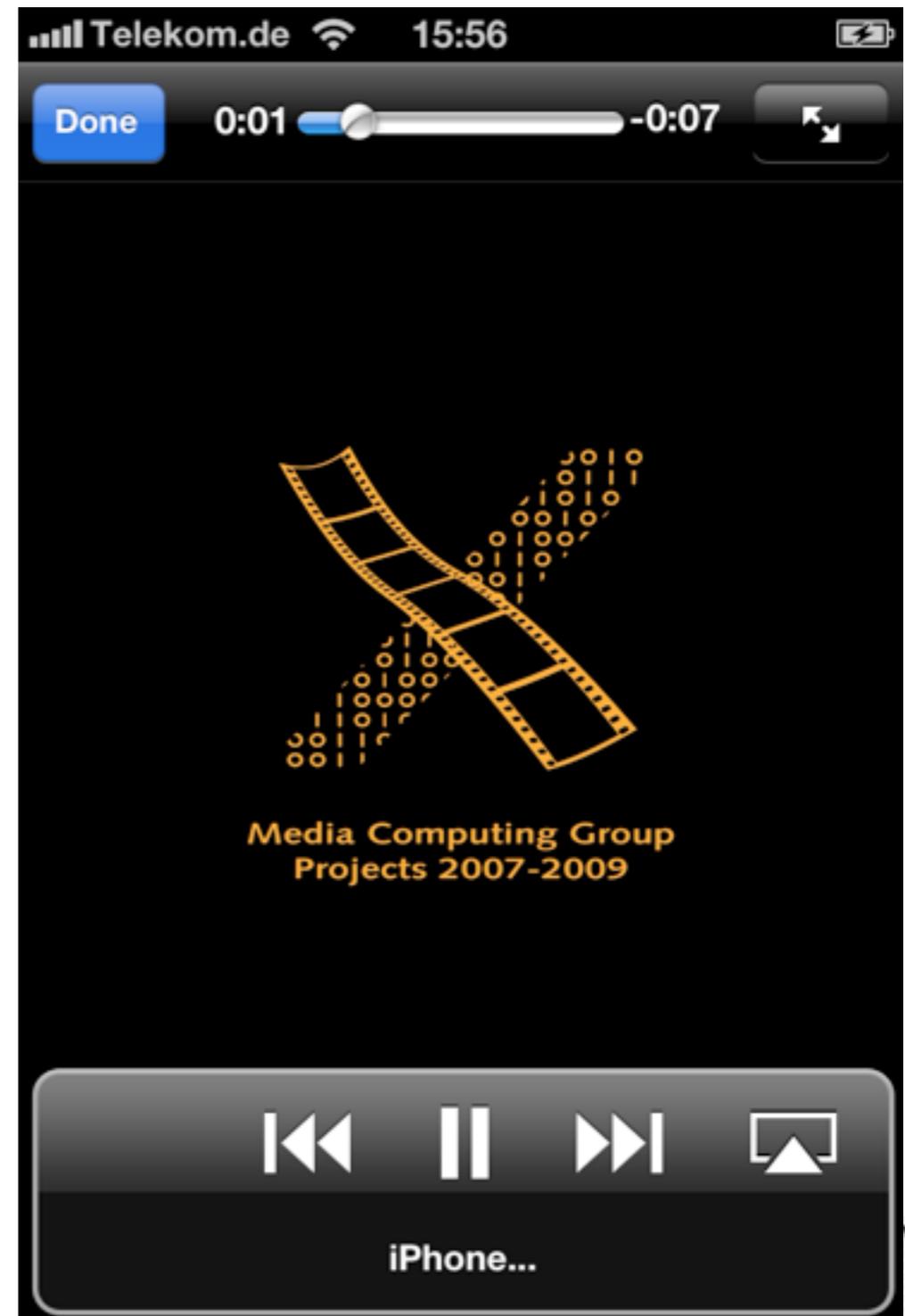


MPMoviePlayerViewController

```
NSURL *url = [NSURL  
URLWithString:@"http://..."];
```

```
MPMoviePlayerViewController  
*VC;
```

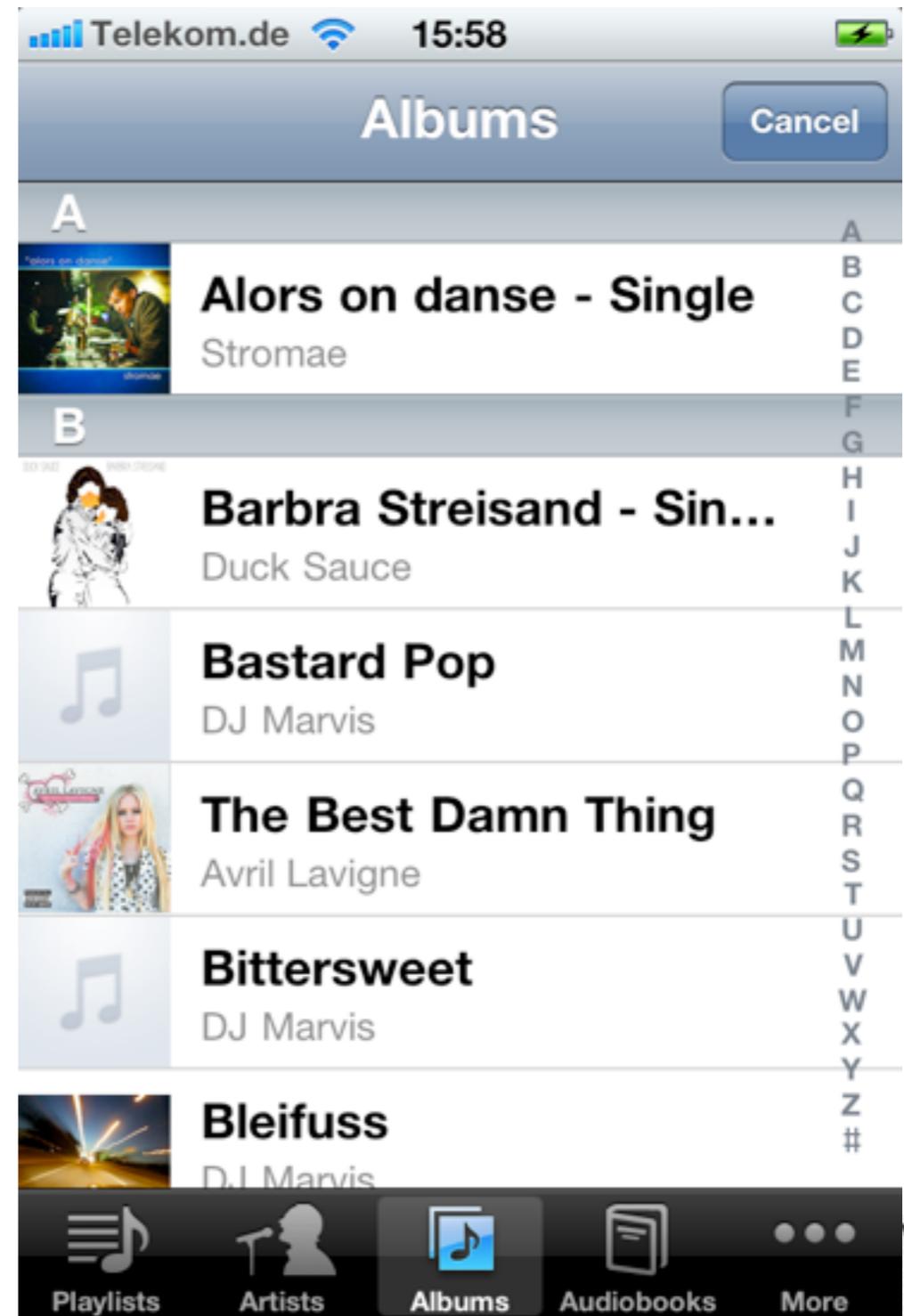
```
VC =  
[[MPMoviePlayerViewController  
alloc] initWithContentURL:url];
```



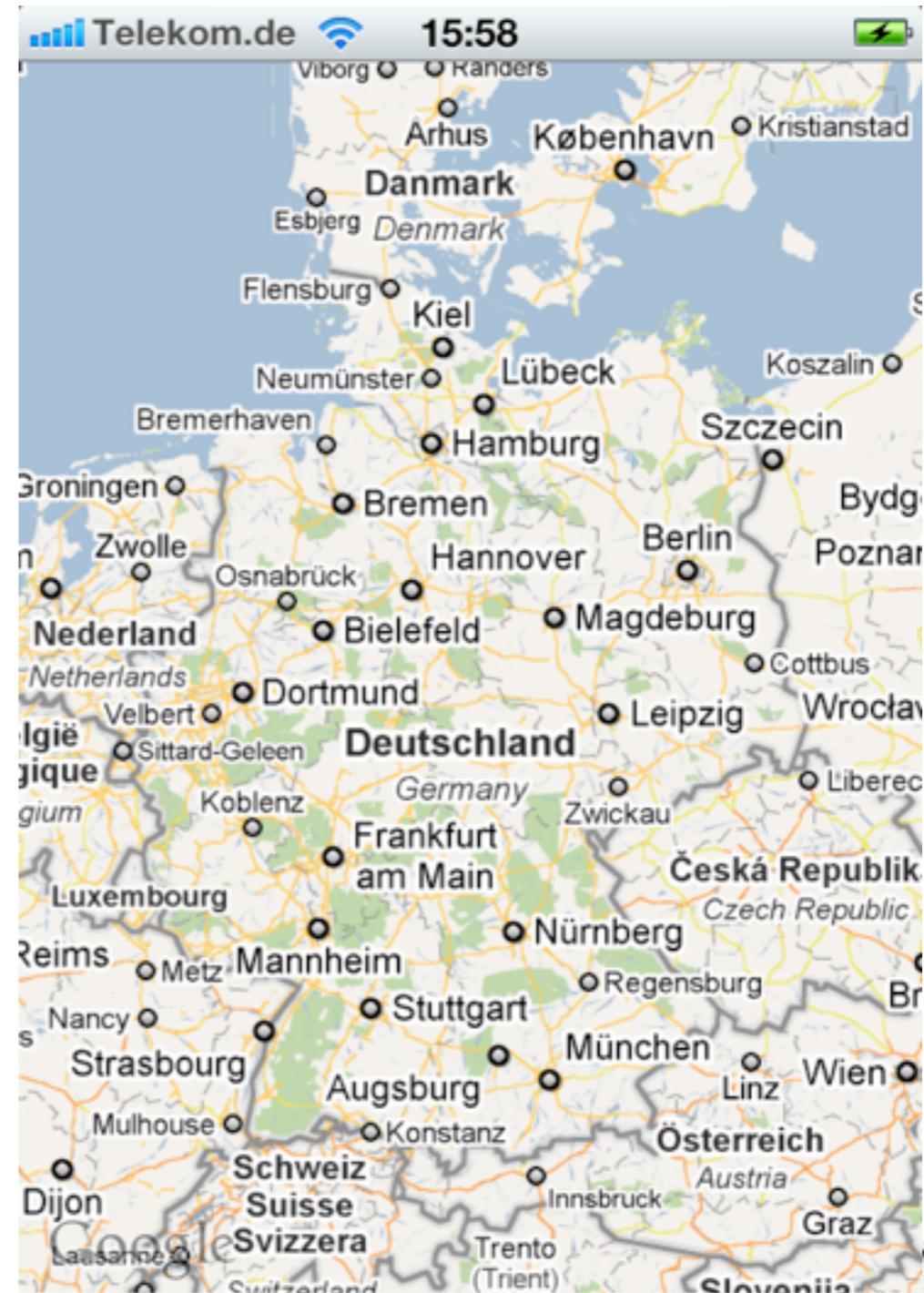
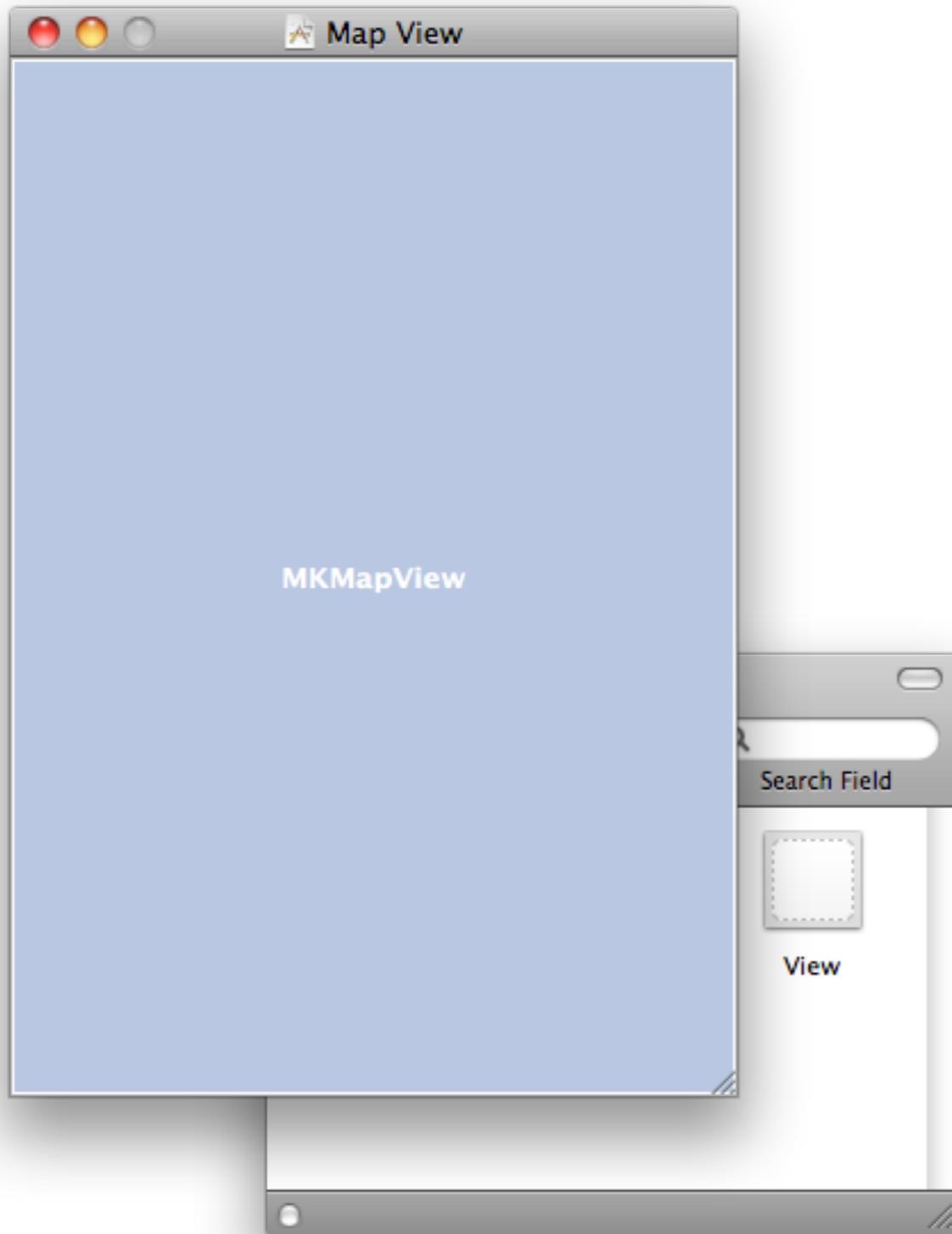
MPMediaPickerController

```
MPMediaPickerController *vc;
```

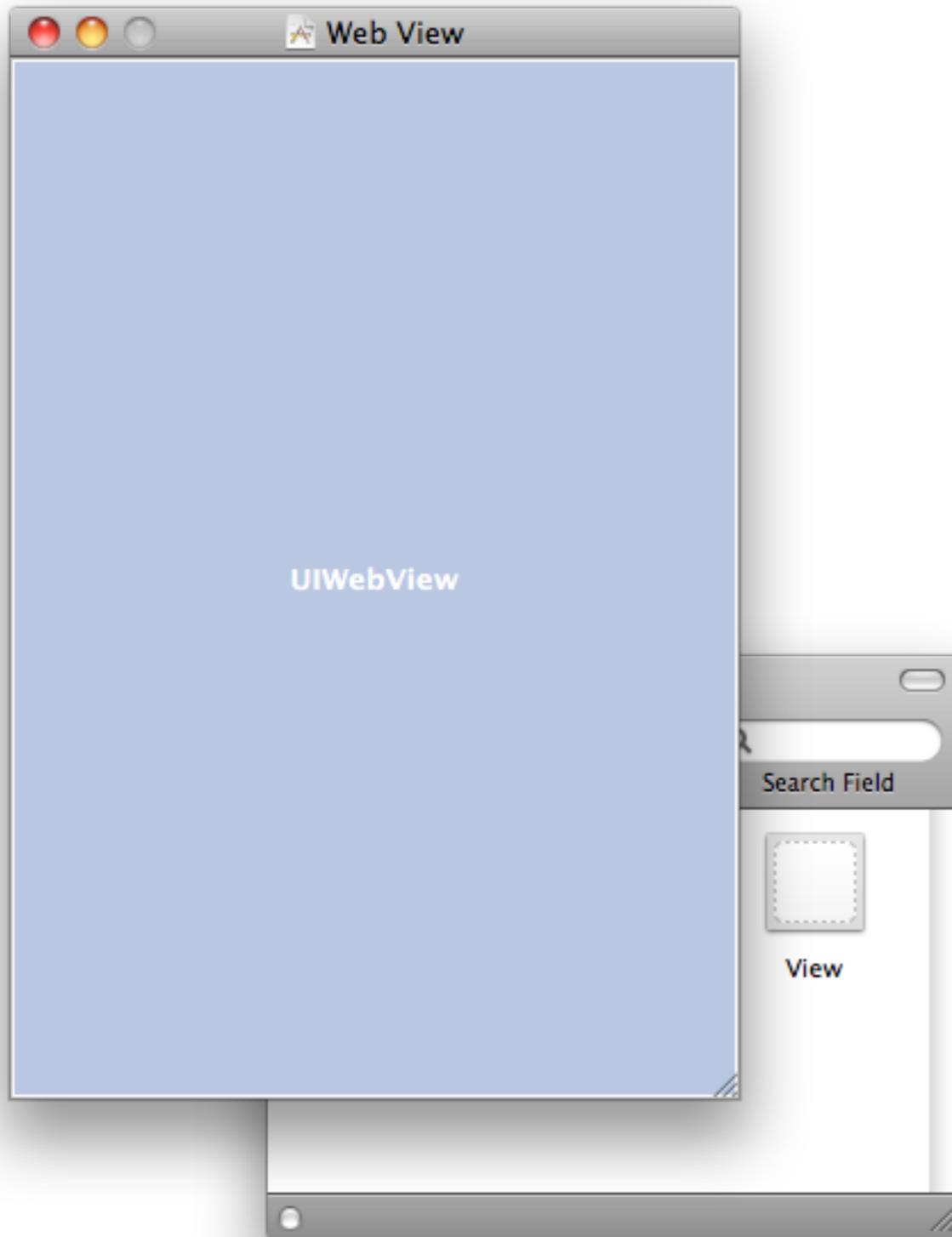
```
vc = [[MPMediaPickerController  
alloc] init];
```



MKMapView



UIWebView



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Lab 5

- Discuss for each of the provided ViewControllers, how they could be used in your project.
- Create a new App that uses one of these view controllers.

